

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2008; month=12; day=5; hr=10; min=20; sec=20; ms=173;]

=====

Application No: 10568998 Version No: 2.0

Input Set:

Output Set:

Started: 2008-11-17 16:03:45.157
Finished: 2008-11-17 16:03:47.050
Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 893 ms
Total Warnings: 34
Total Errors: 0
No. of SeqIDs Defined: 43
Actual SeqID Count: 43

Error code	Error Description
W 402	Undefined organism found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)
W 213	Artificial or Unknown found in <213> in SEQ ID (21)
W 213	Artificial or Unknown found in <213> in SEQ ID (22)
W 213	Artificial or Unknown found in <213> in SEQ ID (23)
W 213	Artificial or Unknown found in <213> in SEQ ID (24)
W 213	Artificial or Unknown found in <213> in SEQ ID (25)
W 213	Artificial or Unknown found in <213> in SEQ ID (26)
W 213	Artificial or Unknown found in <213> in SEQ ID (27)
W 213	Artificial or Unknown found in <213> in SEQ ID (28)
W 213	Artificial or Unknown found in <213> in SEQ ID (29)

Input Set:

Output Set:

Started: 2008-11-17 16:03:45.157
Finished: 2008-11-17 16:03:47.050
Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 893 ms
Total Warnings: 34
Total Errors: 0
No. of SeqIDs Defined: 43
Actual SeqID Count: 43

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (30) This error has occurred more than 20 times, will not be displayed

SEQUENCE LISTING

<110> University of Pittsburgh of the Commonwealth System of
Higher Education
Carnegie Mellon
Sfeir, Charles
Campbell, Phil
Jadlowiec, Julie A.

<120> METHOD OF INDUCING BIOMINERALIZATION, METHOD OF INDUCING BONE
REGENERATION AND METHODS RELATED THERETO

<130> 250030

<140> 10568998

<141> 2006-12-18

<150> US 60/496,245

<151> 2003-08-19

<150> PCT/US04/027076

<151> 2004-08-19

<160> 43

<170> PatentIn version 3.5

<210> 1

<211> 572

<212> PRT

<213> Mus musculus

<400> 1

Gly Ile Glu Thr Glu Gly Pro Asn Lys Gly Asn Lys Ser Ile Ile Thr
1 5 10 15

Lys Glu Ser Gly Lys Leu Ser Gly Ser Lys Asp Ser Asn Gly His Gln
20 25 30

Gly Val Glu Leu Asp Lys Arg Asn Ser Pro Lys Gln Gly Glu Ser Asp
35 40 45

Lys Pro Gln Gly Thr Ala Glu Lys Ser Ala Ala His Ser Asn Leu Gly
50 55 60

His Ser Arg Ile Gly Ser Ser Asn Ser Asp Gly His Asp Ser Tyr
65 70 75 80

Glu Phe Asp Asp Glu Ser Met Gln Gly Asp Asp Pro Lys Ser Ser Asp
85 90 95

Glu Ser Asn Gly Ser Asp Glu Ser Asp Thr Asn Ser Glu Ser Ala Asn
100 105 110

Glu Ser Gly Ser Arg Gly Asp Ala Ser Tyr Thr Ser Asp Glu Ser Ser
115 120 125

Asp Asp Asp Asn Asp Ser Asp Ser His Ala Gly Glu Asp Asp Ser Ser
130 135 140

Asp Asp Ser Ser Gly Asp Gly Asp Ser Asp Ser Asn Gly Asp Gly Asp
145 150 155 160

Ser Glu Ser Glu Asp Lys Asp Glu Ser Asp Ser Ser Asp His Asp Asn
165 170 175

Ser Ser Asp Ser Glu Ser Lys Ser Asp Ser Ser Asp Ser Ser Asp Asp
180 185 190

Ser Ser Asp Ser
195 200 205

Ser Asp Ser Asn
210 215 220

Ser Ser Ser Asp Ser Ser Asp Ser Ser Gly Ser Ser Asp Ser Ser Asp
225 230 235 240

Ser Ser Asp Thr Cys Asp Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser
245 250 255

Ser Asp Ser Ser
260 265 270

Asp Ser Ser Asp Ser Ser Asp Ser Ser Ser Ser Asp Ser Ser Asp
275 280 285

Ser Ser Ser Cys Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser
290 295 300

Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Ser Ser Asp Ser Ser Ser
305 310 315 320

Ser Ser Asn Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Ser
325 330 335

Ser Asp Ser Ser
340 345 350

Gly Ser Ser Asp Ser Ser Asp Ser Ser Ala Ser Ser Asp Ser Ser Ser
355 360 365

Ser Ser Asp Ser Ser Asp Ser Ser Ser Ser Asp Ser Ser Asp Ser
370 375 380

Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Glu Ser Ser Asp Ser Ser
385 390 395 400

Asn Ser Ser Asp
405 410 415

Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Asn Ser
420 425 430

Ser Asp Ser Ser
435 440 445

Asn Ser Ser Asp
450 455 460

Ser Ser Asp Ser
465 470 475 480

Ser Asp Ser Ser
485 490 495

Asp Ser Ser Asp
500 505 510

Ser Ser Asp Ser Ser Asn Ser Ser Asp Ser Ser Asp Ser Asp Ser Lys
515 520 525

Asp Ser Ser Ser Asp Ser Ser Asp Gly Asp Ser Lys Ser Gly Asn Gly
530 535 540

Asn Ser Asp Ser Asn Ser Asp Ser Asn Ser Asp Ser Asp Ser
545 550 555 560

Glu Gly Ser Asp Ser Asn His Ser Thr Ser Asp Asp
565 570

<210> 2
<211> 460
<212> PRT
<213> Mus musculus

<400> 2

Glu Ser Gly Ser Arg Gly Asp Ala Ser Tyr Thr Ser Asp Glu Ser Ser
1 5 10 15

Asp Asp Asp Asn Asp Ser Asp Ser His Ala Gly Glu Asp Asp Ser Ser
20 25 30

Asp Asp Ser Ser Gly Asp Gly Asp Ser Asp Ser Asn Gly Asp Gly Asp
35 40 45

Ser Glu Ser Glu Asp Lys Asp Glu Ser Asp Ser Ser Asp His Asp Asn
50 55 60

Ser Ser Asp Ser Glu Ser Lys Ser Asp Ser Ser Asp Ser Ser Asp Asp
65 70 75 80

Ser Ser Asp Ser
85 90 95

Ser Asp Ser Asn
100 105 110

Ser Ser Ser Asp Ser Ser Asp Ser Ser Gly Ser Ser Asp Ser Ser Asp
115 120 125

Ser Ser Asp Thr Cys Asp Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser
130 135 140

Ser Asp Ser Ser
145 150 155 160

Asp Ser Ser Asp Ser Ser Asp Ser Ser Ser Ser Asp Ser Ser Asp
165 170 175

Ser Ser Ser Cys Ser Asp Ser Ser Asp Ser Ser Asp Ser
180 185 190

Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Ser Asp Ser Ser Ser
195 200 205

Ser Ser Asn Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Ser
210 215 220

Ser Asp Ser Ser
225 230 235 240

Gly Ser Ser Asp Ser Ser Asp Ser Ser Ala Ser Ser Asp Ser Ser Ser
245 250 255

Ser Ser Asp Ser Ser Asp Ser Ser Ser Ser Asp Ser Ser Asp Ser
260 265 270

Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Glu Ser Ser Asp Ser Ser
275 280 285

Asn Ser Ser Asp
290 295 300

Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Asn Ser
305 310 315 320

Ser Asp Ser Ser
325 330 335

Asn Ser Ser Asp
340 345 350

Ser Ser Asp Ser
355 360 365

Ser Asp Ser Ser
370 375 380

Asp Ser Ser Asp
385 390 395 400

Ser Ser Asp Ser Ser Asn Ser Ser Asp Ser Ser Asp Ser Asp Ser Lys
405 410 415

Asp Ser Ser Ser Asp Ser Ser Asp Gly Asp Ser Lys Ser Gly Asn Gly
420 425 430

Asn Ser Asp Ser Asn Ser Asp Ser Asn Ser Asp Ser Asp Ser Asp Ser
435 440 445

Glu Gly Ser Asp Ser Asn His Ser Thr Ser Asp Asp
450 455 460

<210> 3
<211> 1719
<212> DNA
<213> Mus musculus

<400> 3
ggaatagaaa ctgaaggtcc caacaaaggc aacaaaagta ttattaccaa agaatctggg 60
aaactcagtg gaagtaaaga tagcaatgga caccaaggag tggagctgga caaaaggaat 120
agccccaaagc aaggggagtc tgacaagcct caaggcactg ctgagaaatc agctgcccac 180
agtaaacctgg gacacagcag gataggttagc agcagcaata gtgatggca tgacagttac 240
gagttcgatg acgagtccat gcaaggagat gatcccaaga gcagcgacga atctaacgga 300
agtgacgaaa gtgacactaa ctctgaaagc gccaatgaga gtggcagccg tggagatgct 360
tcttacacat ctgatgaatc aagtgtatgat gacaatgaca gtgactcaca tgcgggagaa 420
gacgatagca gtgatgactc atctggtgat ggtgacagtg acagtaatgg tcatgggtac 480
agcgagagtg aggacaagga cgaatctgac agcagtgacc atgacaacag cagtgacagt 540
gagagcaaat cagacagcag tgacagttagt gacgacagca gtgacagcag cgacagtagt 600
gacagcagtg acagcagtga cagtagtgac agtagtgaca gcagcgacag cagtgacagc 660
agcgacagca acagtagtagt tgacagcagc gacagcagcg gttagtagtga cagcagcgac 720
agcagtgaca cctgtgacag cagtgcacgc agcgatagca gtgacagcag tgacagcagt 780
gacagcagcg atagcagtga cagcagtgc acgtgtgaca gcagtgcacag cagcagcagc 840
agcagttagta gtgacagcag cgacagcagc agttgttagt acagcagcga cagcagtgc 900
agcagtgaca gcagcgatag cagtgcacgc agtgcacagca gcagcagcga cagcagcagc 960
agttagcaaca gcagtgcacag tagtgacagc agtgcacagca gcagcagcag cgacagcagc 1020

gacagcagt	acagtagtga	cagcagtgc	actagtgca	gcagtgcac	cagcgacat	1080
agtgccagca	gcgcacgcag	cagtagtagt	gacagcagcg	acagcagtgc	tagtagtgac	1140
agcagtgaca	gtagtgcac	tagtgacac	agtgatacg	gtgagagcag	cgacagcagt	1200
aacagcagt	acagcagcg	cagtagtgac	agcagtgaca	gtagcgac	cagcgacat	1260
agtgacagta	gcgcacgcag	tgcacagtgc	aacagtgcg	acagcagtga	cagcagtgc	1320
agcagcgaca	gtagtgcac	cagcaacagt	agtgacagca	gtgacagtag	cgacagcagt	1380
gacagcagt	acagcagtga	cagcagcgac	actagtgaca	gcagtgcac	tagtgacac	1440
agcgacagta	gtgacagcg	tgcacagcgt	gacagcagt	acagcagcg	cagcagcgac	1500
agcagtgaca	gcagcgac	cagcagacgc	agtgacagca	gcgcacagcg	caacagcagt	1560
gacagcagt	acagtgac	caaggatgc	agttctgaca	gcagtgtgg	tgacagcaag	1620
tctggtaat	gcaacagt	caacacgt	gacagcaaca	gtgacagtg	cagtgcac	1680
gaaggcagt	acagtaacca	ctcaaccgt	gatgattag			1719

<210> 4
<211> 1383
<212> DNA
<213> Mus musculus

<400> 4						
gagagtggca	gccgtggaga	tgcctttac	acatctgtat	aatcaagt	tgatgacaat	60
gacagtgact	cacatgcggg	agaagacgt	agcagtgtat	actcatctgg	tgatgggtac	120
agtgacagta	atggtgatgg	tgcacagcg	agtgaggaca	aggacgaatc	tgacagcagt	180
gaccatgaca	acagcagt	cagtgcac	aaatcagaca	gcagtgcac	tagtgacac	240
agcagtgaca	gcagcgac	tagtgacac	agtgacagca	gtgacagtag	tgacagtagt	300
gacagcagcg	acagcagt	tcgcgcac	agcaacagta	gtagtgcac	cagcgacac	360
agcggtagta	gtgacagcg	cgacagcgt	gacacctgt	acagcagt	tcgcgcgt	420
agcagtgaca	gcagtgcac	cagtgcac	agcgatagca	gtgacagcg	tgacagtagt	480
gacagcagt	acagcagcg	cagcagcgt	actagtgaca	gcagcgac	cagcagtgt	540
agtgacagca	gcgcacagcg	tgcacagcgt	gacagcagcg	atagcagt	tcgcgcgt	600
agcagcagca	gcgcacagcg	cagcagtgc	aacagcagt	acagtagt	tcgcgcgt	660
agcagcagca	gcagcgac	cagcgcac	agtgacagta	gtgacagcg	tgacagtagt	720
ggcagcagt	acagcagcg	cagtagtgcc	agcagcgaca	gcagcagtag	tagtgacac	780

agcgacagca gtagtagtag tgacagcagt gacagtagtg acagtagtga cagcagtat	840
agcagtgaga gcagcgacag cagtaaacagc agtgacagca gcgacagtag tgacagcagt	900
gacagtagcg acagcagcga cagtagtgac agtagcgaca gcagtgacag tagcaacagt	960
agcgacagca gtgacagcag tgacagcagc gacagtagtg acagcagcaa cagtagtgac	1020
agcagtgaca gtagcgacag tagtgacagc agtgacagca gtgacagcag cgacagtagt	1080
gacagcagtg acagtagtga cagcagcgc acgttgtaca gcagtgacag cagtgcacgc	1140
agtgcacagca gcgacagcag cgacagcagt gacagcagcg acagcagcga cagcagtgcac	1200
agcagcgcaca gcagcaacag cagtgcacagc agtgacagtg acagcaaggaa tagcagtct	1260
gacagcagtg atggtgacag caagtctggt aatggcaaca gtgacagcaa cagtgcacagc	1320
aacagtgaca gtgacagtga cagtgaaggc agtgacagta accactcaac cagtgtatgtat	1380
tag	1383

<210> 5
<211> 936
<212> PRT
<213> *Mus musculus*

<400> 5
Met Lys Met Lys Ile Ile Ile Tyr Ile Cys Ile Trp Ala Thr Ala Trp

Ala Ile Pro Val Pro Gln Leu Val Pro Leu Glu Arg Asp Ile Val Glu
26 25 26

Asn Ser Val Ala Val Pro Leu Leu Thr His Pro Gly Thr Ala Ala Gln
 35 40 45

Asn	Glu	Leu	Ser	Ile	Asn	Ser	Thr	Thr	Ser	Asn	Ser	Asn	Asp	Ser	Pro
50						55						60			

Asp	Gly	Ser	Glu	Ile	Gly	Glu	Gln	Val	Leu	Ser	Glu	Asp	Gly	Tyr	Lys
65					70					75					80

Arg Asp Gly Asn Gly Ser Glu Ser Ile His Val Gly Gly Lys Asp Phe
85 90 95

Pro Thr Gln Pro Ile Leu Val Asn Glu Gln Gly Asn Thr Ala Glu Glu
100 105 110

His Asn Asp Ile Glu Thr Tyr Gly His Asp Gly Val His Ala Arg Gly
115 120 125

Glu Asn Ser Thr Ala Asn Gly Ile Arg Ser Gln Val Gly Ile Val Glu
130 135 140

Asn Ala Glu Glu Ala Glu Ser Ser Val His Gly Gln Ala Gly Gln Asn
145 150 155 160

Thr Lys Ser Gly Gly Ala Ser Asp Val Ser Gln Asn Gly Asp Ala Thr
165 170 175

Leu Val Gln Glu Asn Glu Pro Pro Glu Ala Ser Ile Lys Asn Ser Thr
180 185 190

Asn His Glu Ala Gly Ile His Gly Ser Gly Val Ala Thr His Glu Thr
195 200 205

Thr Pro Gln Arg Glu Gly Leu Gly Ser Glu Asn Gln Gly Thr Glu Val
210 215 220

Thr Pro Ser Ile Gly Glu Asp Ala Gly Leu Asp Asp Thr Asp Gly Ser
225 230 235 240

Pro Ser Gly Asn Gly Val Glu Glu Asp Glu Asp Thr Gly Ser Gly Asp
245 250 255

Gly Glu Gly Ala Glu Ala Gly Asp Gly Arg Glu Ser His Asp Gly Thr
260 265 270

Lys Gly Gln Gly Gln Ser His Gly Gly Asn Thr Asp His Arg Gly
275 280 285

Gln Ser Ser Val Ser Thr Glu Asp Asp Asp Ser Lys Glu Gln Glu Gly
290 295 300

Phe Pro Asn Gly His Asn Gly Asp Asn Ser Ser Glu Glu Asn Gly Val
305 310 315 320

Glu Glu Gly Asp Ser Thr Gln Ala Thr Gln Asp Lys Glu Lys Leu Ser
325 330 335

Pro Lys Asp Thr Arg Asp Ala Glu Gly Gly Ile Ile Ser Gln Ser Glu
340 345 350

Ala Cys Pro Ser Gly Lys Ser Gln Gly Ile Glu Thr Glu Gly Pro Asn
355 360 365

Lys Gly Asn Lys Ser Ile Ile Thr Lys Glu Ser Gly Lys Leu Ser Gly
370 375 380

Ser Lys Asp Ser Asn Gly His Gln Gly Val Glu Leu Asp Lys Arg Asn
385 390 395 400

Ser Pro Lys Gln Gly Glu Ser Asp Lys Pro Gln Gly Thr Ala Glu Lys
405 410 415

Ser Ala Ala His Ser Asn Leu Gly His Ser Arg Ile Gly Ser Ser Ser
420 425 430

Asn Ser Asp Gly His Asp Ser Tyr Glu Phe Asp Asp Glu Ser Met Gln
435 440 445

Gly Asp Asp Pro Lys Ser Ser Asp Glu Ser Asn Gly Ser Asp Glu Ser
450 455 460

Asp Thr Asn Ser Glu Ser Ala Asn Glu Ser Gly Ser Arg Gly Asp Ala
465 470 475 480

Ser Tyr Thr Ser Asp Glu Ser Ser Asp Asp Asp Asn Asp Ser Asp Ser